

# BODY-PART TERMS AND NUMBER MARKING IN EMAI

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In this paper we examine the morphological structure of body-part terminology in Emai, a Kwa language of southern Nigeria. Our interest in this domain centers on the structural configuration of number and number agreement within compounds. We establish first that number marking in primary compounds, those involving two or more nominals, is controlled by the right nominal, the Head. We then turn to the manifestation of number in synthetic compounds, those involving a verb stem. For convenience we begin with simple body-part terms.

Morphologically simple body-part terms are in the majority. Covering all areas of body space, they are grouped in the following table. Their noncomplex nature is consistent with nomenclature patterns found to exist cross-linguistically by Andersen (1978) for "basic" body parts.

TABLE I. Morphologically simple body part terms.

égbe	'body'	ényen	'breast area'
egele	'pubic region'	átuf	'anus region'
evie	'scrotum'	ukhon	'navel region'
idáma	'chest'	uokho	'back'
ítihian	'buttock'	ékéin	'belly'
eo	'face'	ihue	'nose, nostril'
éhon	'ear'	únu	'mouth'
óemi	'tongue'	akón	'tooth'
iyoo	'gum'	éto	'hair'
úhumi	'head'	ehai	'forehead'
iro	'cheek'	agban	'jaw, chin'
éain	'neck'	erere	'soft spot on head'
akhqi	'occipital area'	éhién	'finger-/toenail'
íghighe	'armpit'	ibegun	'shin'

A system of morphologically compound words encode a range of nonbasic body parts in Emai. At the core of this system are minimally complex forms in which an affix designating number is attached to a nominal stem, e.g. *óbo*, *ábo* 'hand, arm' and *oe*, *awe* 'foot, leg.' Plurality is conveyed in both by the affix *a-*, while *o-*

The principal hypothesis we need to confirm at the outset is that in body-part compounds consisting of two or more nominals the rightmost constituent controls number marking and, hence, functions as Head of the compound. This hypothesis is complemented by a semantic definition of Head in terms of a 'part of' rather than 'kind of' relation, although the latter is more usual, e.g. *mailman* as a kind of *man* (Bauer 1983). The Head in most of the primary compounds below specifies the body area relative to which some part, identified by the non-Head constituent, is singled out for denotation, as in the English example of *forearm* as part of *arm*.

At this juncture one might ask how the Head of a compound is positioned in compounds outside the body-part domain. Tables II and III attempt to answer this question by showing that the Head occurs in both left and right position, e.g. *éámogo* [éámi 'animal' - ogo 'bush'] is a type of animal and *inyéwe* [inyo 'mother' - éwe 'goat'] is a type of goat. We cannot, therefore, assume that the Head of a compound in the body-part domain is either the left or right nominal constituent.

TABLE II. Compounds with left nominal Head.

éámogo [éami 'animal'- ogo 'bush] 'wild/bush animal'  
 ísiogo [isi 'pig'- ogo 'bush'] 'bushpig'  
 ákhome [ákhe 'pot'-ame 'water'] 'water pot'  
 áṣagbedé [aṣe 'hut'-agbedé 'blacksmith'] 'blacksmith shop'  
 ényúdi [ényon 'wine'- údi 'palm'] 'palmwine'  
 óṣuden [ósa 'soap'- uḍen 'palm kernel oil'] 'blacksoap'  
 óṣokoto [ósa 'soap'- okoto 'mushy substance'] 'soda soap'  
 ékiókho [éken 'egg'- óókho 'chicken'] 'chicken egg'

TABLE III. Compounds with right nominal Head.

inyéwe [inyo 'mother'-éwe 'goat'] 'she-goat'  
 inyóókhó [inyo 'mother'-óókhó 'chicken'] 'hen'  
 ílékéwe, ílékéwe [uleke 'pubescent one'-éwe 'goat']  
                   'virgin goat'  
 inyúdo [inyo 'mother'-údo 'stone'] 'mortar'

Before proceeding to our analysis, we briefly outline relevant aspects of the theoretical framework we will use to explore number marking and headedness in Emai compounds. In this regard we rely principally on

Lieber (1980, 1983) and her specification of feature percolation, i.e. the notion that morpheme features become interpreted as features of an entire word. Not all features percolate, however, leading to conventions which specify precedence relations among constituents. Below, we state these conventions, all of which, except 4, are postulated as universal.

1. All features of a stem morpheme percolate to the first non-branching node dominating that morpheme.
2. All features of an affix morpheme percolate to the first branching node dominating that morpheme.
3. If a branching node fails to obtain features by Convention II, features from the next lowest labelled node percolate to the unlabelled branching node.
4. If two stems form a compound, features from the right stem percolate to the branching node dominating the stems.

In sum, Lieber maintains that all features percolate but not all features percolate to the compound, affixal features in particular taking precedence over stem features. Although convention 4 is stipulated as language specific, we will find that it is consistent with body-part terms exhibiting the partitive relation. In addition to these four, two additional conventions are stipulated to account for the behavior of verbs in compounds.

5. An element of a compound must be able to link all its obligatory internal arguments.
6. A compounded stem not linked by an argument-taking stem compounded with it must be interpretable as a restrictive modifier of that stem, i.e. as a Locative, Manner, Instrumental or Benefactive.

In essence, if features of a verb stem percolate to the compound as a whole, the verb must be able to link its internal arguments outside the compound, e.g. *They handweaved the cloth with hand* representing a noninternal, Instrumental, argument; if its features do not percolate to the compound, then its internal argument features must be satisfied within the compound, e.g. *drawbridge*, with *bridge* as the internal argument representing the Theme of *draw*.

Number marking in primary compounds referring to body parts consists of four major types, each characterized in terms of two dimensions. One dimension emphasizes number marking across constituents: double marking in which number is indicated on both constituents; or single marking in which number is expressed on only one. The other emphasizes number marking within each constituent; double or single marking may be symmetrical, both singular and plural being expressed, or it may be asymmetrical, either singular or plural but not both being expressed. Of these types, the asymmetrical forms present the strongest evidence that number marking is controlled by the rightmost constituent.

A variety of compounds exhibit asymmetrical single marking with respect to number. All are of the formal shape [N - N], with the first noun consisting of an affix plus stem and the second an unanalyzable word, as shown in Table IV. Semantically, the affix-stem functions as a partitive marker, isolating some area as Figure within a larger Ground area specified by the unanalyzable word. The meaning of the affix-stem unit reveals metaphorical extension, as in the example *úkpa/íkpa* which means literally either 'beak/beaks' or 'seed/seeds,' but metaphorically 'part of'.

Table IV. Asymmetrically single marked compounds.

<i>úkpagban</i>	[ <i>úkpa</i> 'beak' - <i>agban</i> 'chin']	'cleft of the chin'
<i>úkpəhai</i>	[ <i>úkpa</i> 'beak' - <i>əhai</i> 'forehead']	'mid forehead'
<i>úkpókóló</i>	[ <i>úkpa</i> 'beak' - <i>ókóló</i> 'throat']	'larynx'
<i>úkpəgele</i>	[ <i>úkpa</i> 'beak' - <i>egəle</i> 'penis']	'tip of penis'
<i>úkpukhɔn</i>	[ <i>úkpa</i> 'beak' - <i>ukhɔn</i> 'navel']	'belly button'
<i>úkpátuí</i>	[ <i>úkpa</i> 'beak' - <i>átuí</i> 'anus']	'end of anus'

The affix-stem analysis of the first constituent is significant for number marking and its control. The non-occurrence of corresponding forms with *íkpa*, such as *\*íkpagban*, argues that it is the right not the left constituent which controls number marking. Charting our analysis in terms of Lieber's conventions and the tree representations in 1a and 1b, we note that relevant features are specified on each affix, stem or word. Consistent with Convention 2, affixal features percolate to the first branching node for the left nominal in each tree. At this first N-level there is no problem. At the next N-level, however, there is a problem, for we must decide which features percolate to it and, therefore, to the mother node of the compound where number is controlled. Since neither the left nor

right constituent is an affix at the second N-level, the features of one or the other must percolate.

- 1a. 
$$\begin{array}{c} \text{N -pl} \\ / \quad \backslash \\ \text{-pl N} \quad \text{N -pl} \\ / \quad \backslash \quad \text{agban} \\ \text{-pl u} \quad \text{kpa} \\ \text{úkpagban} \end{array}$$
- \*1b. 
$$\begin{array}{c} \text{N -pl} \\ / \quad \backslash \\ \text{+pl N} \quad \text{N -pl} \\ / \quad \backslash \quad \text{agban} \\ \text{i} \quad \text{kpa} \\ \text{*ikpagban} \end{array}$$

If we assume that features of the left constituent percolate to the second N-level, the -plural feature of *úkpa*, as well as the +plural feature of *ikpa* could arrive at the mother node and thus control number marking. As a consequence, both *úkpagban* and *ikpagban* should be grammatical. That only the former exists argues that the right constituent *agban* determines whether *úkpa* or *ikpa* will occur and that, therefore, its feature specification as Head must be -plural. Assuming that agreement in these cases is specified as a coincidence relation between a mother node and its left daughter, we note with respect to 1b that if the -plural feature of *agban* percolates to the compound, i.e. to the mother node, then *ikpagban* will be rejected since *ikpa*'s +plural feature will conflict with the -plural feature of *agban*, the Head.

Another body-part term shows how a Head must be specified for the feature +plural. The compound *íkélégbe* is composed of the elements *ikele* 'chunks,' which contrasts with the singular form *ukele* 'chunk,' and *égbe* 'body,' which has no corresponding plural. If the *ikele* constituent controlled agreement, then *\*ukelegbe* should also occur. Since it does not, it must be *egbe* which determines the shape of the left constituent, requiring *ikele* rather than *ukele*. Specifying *egbe* with the feature +plural, and assuming that this feature percolates to the mother node, as in 2b, will produce the desired results. This also rules out *\*ukelegbe* since the -plural specification of *ukele* and the +plural specification of *egbe* would be in conflict.

- \*2a. 
$$\begin{array}{c} \text{N +pl} \\ / \quad \backslash \\ \text{-pl N} \quad \text{N +pl} \\ / \quad \backslash \quad \text{egbe} \\ \text{-pl u} \quad \text{kele} \\ \text{*úkélégbe} \end{array}$$
- 2b. 
$$\begin{array}{c} \text{N +pl} \\ / \quad \backslash \\ \text{+pl N} \quad \text{N +pl} \\ / \quad \backslash \quad \text{egbe} \\ \text{+pl i} \quad \text{kele} \\ \text{íkélégbe} \end{array}$$

A third variation on the asymmetric single marking scheme is *ómeo* [ómo 'child' - eo 'face'] 'eyeball.' It contrasts with others in this set since its first element exhibits suppletion rather than affixal alternation, i.e. *ivbia* 'children.' However, the form \**ivbieo* does not occur, suggesting again that it is the right constituent which controls the shape of the constituent on the left.

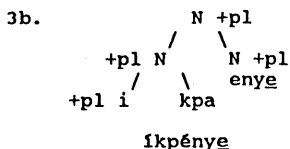
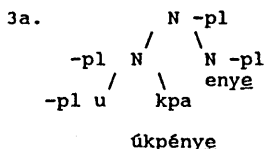
Symmetrical single marking with respect to number is also found in Emai body-part compounds. Forms of this type, shown in Table V are all of the formal shape [ N-N ], where the initial nominal consists of an affix adjoined to a stem and the second an unanalyzable form. The initial nominal most frequent in these compounds occurred in Tables III and IV, at least in the singular, and still has a partitive meaning. The other initial nominal participating in these compounds is *igugúmi* meaning 'lump.'

Table V. Symmetrically single marked compounds.

úkpénye, íkpénye	[úkpa 'beak' - énye 'breast'] 'nipple of the breast'
úkpevie, íkpevie	[úkpa 'beak' - evie 'scrotum'] 'testicle'
úkpéhién, íkpéhién	[úkpa 'beak' - éhién 'nail'] 'tip of fingernail or toenail'
úkpehon, íkpehon	[úkpa 'beak' - ehon 'ear'] 'earlobe'
úkpeo, íkpeo	[úkpa 'beak' - eo 'face'] 'eyesocket'
úkpíhue, íkpíhue	[úkpa 'beak' - íhue 'nose'] 'point of the nose'
úkpóemi, íkpóemi	[úkpa 'beak' - óemi 'tongue'] 'tip of tongue'
úkpakon, íkpakon	[úkpa 'seed' - akon 'tooth'] 'tooth, teeth'
úkpéto, íkpéto	[úkpa 'seed' - éto 'hair'] 'lock or tuft of hair'
úgugúmeo, ígugúmeo	[úgugúmi 'lump' - eo 'face'] 'eye brow'

With regard to these forms, if we assume that the right nominal is Head and is specified for both +plural and -plural, features will percolate in the desired fashion and agreement can be maintained as a relationship between a mother and left daughter node. Applying Lieber's conventions to the forms in 3a and 3b for 'nipple' and 'nipples,' e.g. *úkpényen* [úkpa 'beak'

- énye 'breast'] and *ikpényen* [ikpa 'beaks'- énye 'breast'], we first specify relevant features for each affix, stem or root. Convention 2 allows affixal features to percolate to the first branching node, thus affecting the left constituent but not the right, where there is no evidence of an affix. By Convention 4, features of the right constituent percolate, placing either the +plural or -plural feature of *egbe* at the mother node. From there, agreement is transacted between this node and its left daughter.



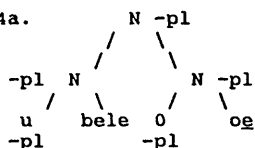
Asymmetrical double marking among body-part compounds is not as common as single marking. It does occur in forms like *ibélawé* 'calf of the leg,' which is composed of two nominal constituents having the morphological structure affix plus stem. As with previous examples, the meaning of the first constituent, in addition to its partitive quality, reveals metaphorical extension, with *ibele* meaning 'calabashes/gourds' relative to the singular of *ubele*.

Number marking in this instance is consistent with the right Head hypothesis, as shown in 4b. Lieber's Conventions 2 and 4 allow the +plural feature to percolate to the first and second N-levels for the right constituent and to the first N-level for the left constituent. With this feature configuration, agreement is transacted between the mother node and its left daughter. Consequently, forms like *\*ubelawé* and *\*ibelowé* will be rejected, since agreement does not obtain. Relative to a form like *\*ubelowé* in 4a a factor other than agreement must operate. We would like to argue that such a form, indeed, existed at some earlier diachronic state but has become lost through a process of historical change, which at this juncture, can only be the object of speculation.

Other forms which manifest asymmetrical double marking include the forms for 'wrist' *úkpémóbó* [úkpémi 'section between nodes' - óbó 'hand']; 'ankle' *úkpémoe* [úkpémi 'section between nodes' - oe 'leg']; and the 'entire leg,' *óroo* [óran 'tree/wood'-oe 'leg']. Although both constituents individually can manifest

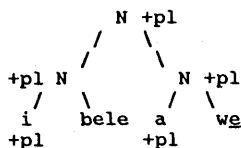
number marking, i.e. *úkpémi/ikpémi*; *óbo/ábo*; *oé/awé*; *óran/éran*, only the singular form appears in compounds.

?\*4a.



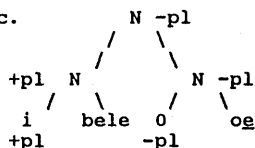
?\*úbéloé

4b.



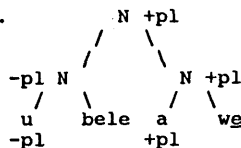
íbélawe

\*4c.



\*íbeloé

\*4d.

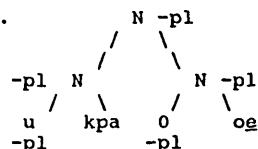


\*ubelawe

A still more complex combination of number marking is found in body-part terms exhibiting symmetrical double marking. These [N-N] shapes contain two constituents consisting of an affix and a stem. Semantically, the partitive meaning is present as is metaphorical extension of the initial constituent.

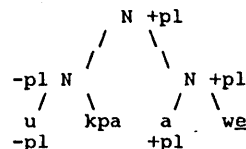
The manifestation of number marking in these compounds follows from the hypotheses developed above. Using the forms for 'toe' *úkpog* [*úkpa* 'beak' - *oé* 'foot'] and 'toes' *íkpa<sub>wé</sub>* [*íkpa* 'beak' - *awé* 'feet'], respectively, to illustrate, we allow Conventions 2 and 4 to locate number features at the appropriate N-levels in trees 5a and 5b. Agreement is then transacted between the mother node of the compound and its left daughter. Where these features do not coincide, as in 5b, the ungrammaticality results.

5a.



úkpog

\*5b.



\*úkpawé



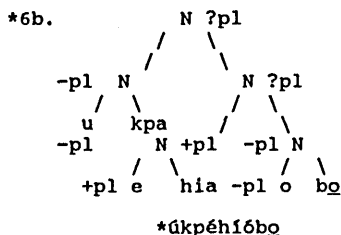
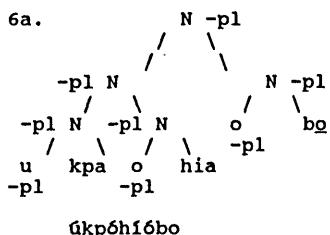
Other forms exhibiting symmetrical double marking are shown in Table VI. The partitive relation is evident in each, with the left nominal specifying a subpart of the whole denoted by the right nominal. Structurally, configurations similar to 5a apply, with the conventions postulated by Lieber marking forms such as \*orab<sub>o</sub> and \*erob<sub>o</sub> as ungrammatical.

Table VI. Symmetrically double marked compounds.

órób<sub>o</sub>, éráb<sub>o</sub> [óran 'tree' - ób<sub>o</sub> 'arm'] 'forearm/s'  
 úsok<sub>o</sub>, ísokáw<sub>e</sub> [usoko ? - og 'leg'] 'thigh muscle/s'  
 úkélób<sub>o</sub>, íkéláb<sub>o</sub> [ukele 'chunk' - ób<sub>o</sub> 'arm'] 'armlength'

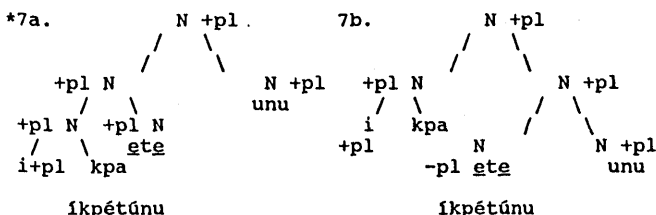
An interesting test for the assumptions of our analysis rests with body-part compounds composed of three nominals. Examples of such forms are úkpóhíób<sub>o</sub> [úkpa 'beak' - óhia 'animal hoof' - ób<sub>o</sub> 'hand'] 'finger' and íkpéhiáb<sub>o</sub> [íkpa 'beak' - éhia 'animal hooves' - áb<sub>o</sub> 'hands'] 'fingers,' where each constituent nominal is composed of an affix and a stem.

The structural issue which these forms present is spelled out in the structural configurations 6a and 6b. If we choose 6b as the representation for these forms, the ohia/ehia nominal would form a constituent with ób<sub>o</sub>/áb<sub>o</sub>, implying that the resulting compound could be a possible word. Formally no such form exists. Semantically, it is difficult to determine what it would mean, since the meaning of hoof and hand would have to be combined. Since no partitive relation is evident, there is no semantic justification for positing the right constituent as Head at the second N-level, where a Head must be operating to reject the mixed features of ehíób<sub>o</sub> and ohíáb<sub>o</sub>.



On the other hand, if we assume the correctness of 6a, the rightmost constituent *óbq* would function as Head of the entire compound and *ohia* as Head of an internal compound consisting of *ukpa* and *ohia*. Conventions 2 and 4 could then apply, allowing -plural to percolate to the first N-level for all constituents and then to the second N-level for *ohia* and *óbq*. At this point, agreement would take place, matching the mother node at the second N-level with its left daughter and then matching the mother node at the third N-level with its left daughter. This would allow us to reject as ungrammatical forms like *\*ukpehiobq* and *\*ikpohiabo*. Interestingly, this analysis suggests that the nonexistent forms *ukpohia* and *ikpehia* could occur with the meanings 'part/s of the hoof.'

Fewer number features are evident in the pair *úkpétúnu* [*úkpa* 'beak' - *et̩* 'wound' - *únu* 'mouth'] 'lip' and *ikpétúnu* [*ukpa* 'beak' - *et̩* 'wound' - *unu* 'mouth'] 'lips'. Although number marking is symmetrical, it involves only a single nominal, the leftmost. Although one might want to advance the same structural configuration seen in 6a for these forms, it would imply that the middle nominal *et̩* is specified for +plural and -plural. Since only the form *úkp̩et̩* meaning 'surface area of a wound' occurs, we can only assume that *et̩* is specified for the feature -plural. For this reason it seems appropriate to postulate 7b for these compounds. One consequence of this analysis is that *et̩* and *unu* form an internal compound, which, though non-existent, might have occurred, since metaphorical extension of the left constituent would be manifest in an overall partitive relation.



The preceding has surveyed all the nominal compound types which occur in Emai. One type which does not occur is symmetrical single marking in which number is indicated only on the Head or right nominal constituent and not the non-Head. The absence of such

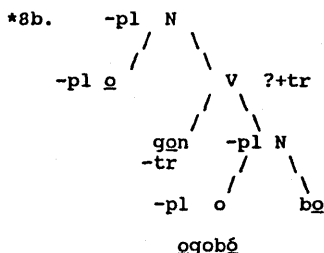
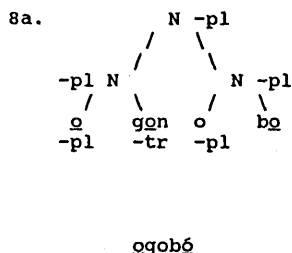
forms seems logical, for why activate an agreement parameter and then not allow it to operate.

Now that we have established how headedness and number agreement are intertwined, let us quickly review two exceptions. Both compounds in question are Left-headed; one involves asymmetric double marking, i.e. *óbódíon* [óbo 'hand'-ódíon 'senior'] 'righthand' and the other zero marking, i.e. *ákivín* [akón 'tooth'-ivín 'palm kernel'] 'molar tooth.' That they are exceptions is not surprising since neither manifests the partitive relation, a right hand is not part of the hand, it is a kind of hand. Similarly the molar is a kind of tooth, not a part of a tooth. The nonpartitive semantic nature of these compounds is thus consistent with absence of a Head in right position. Nonetheless, number agreement, at least as required for *óbódíon* by the contrasting forms *óbq/ábq* 'hand/hands' and *ódíon/édíon* 'senior/seniors,' would operate as in earlier examples except that agreement would be specified in terms of mother and right rather than left daughter. For these compounds, Lieber's Convention 4 will require respecification to allow the left nominal to percolate to the mother node.

A synthetic compound in the body-part domain contains a verb as one of its constituents. Compared to primary compounds, their range of number marking types is fewer. The asymmetrical double and symmetrical single types do not occur. It does not appear that double marking occurs with these forms either, at least in their present diachronic state. The notion Head and the mechanism of agreement specified above prove useful when choosing among configurations for these compounds.

Asymmetrical single marking appears to predominate among synthetic body-part compounds. They have the shape [affix+verb stem - affix+noun stem]. Semantically, the initial constituent characterizes rather than partitions the nominal in the second constituent and does so in an inconsistent manner with respect to metaphorization, e.g. *ogobq* [o 'nominalizing prefix' - gon 'be crooked' - óbq 'hand'] means 'left hand,' not the literal 'crooked hand;' while *étábq* [e 'nominalizing prefix' - tan 'to spread open' - ábq 'hands'] and *étáwq* [e 'nominalizing prefix' - tan 'to spread open' - awq 'feet'] mean 'palm of the hand' and 'sole of the foot,' respectively, in line with the meaning of tan 'to spread open.'

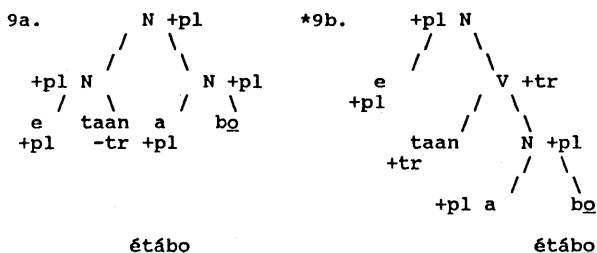
As for *ogobó*, a structure such as 8a rather than 8b can be justified. Two points are relevant. In 8b a direct object relation is claimed to hold between the verbal and nominal elements; the form *gon*, however, only occurs as an intransitive verb. In 8a, on the other hand, an intransitive relation is specified, with the prefix *o* deriving a nominal from a verbal element. Nominal derivation from a verbal base is consistent with the behavior of *o*- in forms like *oben* 'weed with leaves that cut' from *ben* 'to cut'; *ogúá* 'sitting room' from *gua* 'to accomodate'; and *qlaa* 'bitterness' from *laa* 'to be bitter'. It also follows from 8a that the preverbal affix would be specified as -plural for purposes of agreement. This, too, is consistent with its behavior in other compounds, especially those denoting occupations, e.g. *onwuime/inwuime* 'farmer/s' and *oteta/iteta* 'speaker/s' where *o*- in the singular alternates with *i*- in the plural.



The next examples of asymmetric single marking, *étábo* and *étáwe*, are somewhat more difficult to analyze, especially with regard to the structural relationship between its verbal and nominal constituents. Given their meanings one could view this relationship as transitive or intransitive, the nominal functioning as a Thematic direct object in the former case, e.g. 9b. On what grounds can one choose between the alternatives in 9b and 9a?

One argument against 9b is the expression of the corresponding relation at the syntactic level. The verb *taan* requires the presence of the Change of State marker *á* when it is transitive, i.e. *taan abo a*. We would thus expect its presence in these compounds, just as we find it in others where a Thematic direct object relation can be inferred, i.e. *onyunuá* [*o nyan* 'force' - *únu* 'mouth' - *á* 'CS'] 'surprise.' Since there is no constraint blocking occurrence of *á* in compounds and

since it is required in transitive structures with *taan*, 9b appears inadequate as a representation.

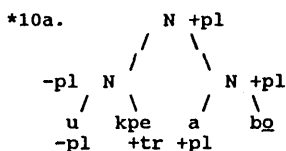


Another argument against 9b centers on agreement. If 9b represents étáb<sub>Q</sub>, the +plural feature of *ab<sub>Q</sub>* would not percolate to the mother node of the tree since the node dominating it would be characterized as V +tr consistent with the presence of *taan*. It follows that the *e-* prefix would be unassociated with number. We suspect that this is not the case, however, for *e-* is regularly aligned with plurality in the formation of Emai nouns. Table VII is a list of forms indicating the plural character of the *e-* affix; it never occurs in the singular.

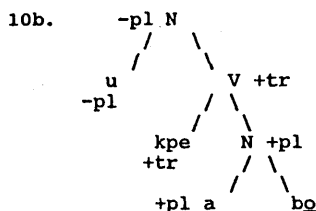
TABLE VII. Noun pairs contrasting in *e-* affix.

áwa	'dog'	éwa	'dogs'
éwe	'goat'	éwe	'goats'
ófe	'rat'	éfe	'rats'
óbo	'doctor'	ébo	'doctors'

When discussing 9b we assumed that features of nominals like *áb<sub>Q</sub>* in Thematic direct object relations would not percolate. Is there data in Emai to support this position? Consider the example *ukpab<sub>Q</sub>* [u 'nominalizing prefix' kpe 'to wash' áb<sub>Q</sub> 'hands'] 'washbasin,' where a verb and its linked nominal marked for plurality are adjoined to an affix associated with singularity. There is no corresponding \**ukpob<sub>Q</sub>* form. As 10a below indicates, if *kpe* and *áb<sub>Q</sub>* are not linked by a dominating V node, then *ukpab<sub>Q</sub>* would be flagged as ungrammatical because it violates agreement under the terms we have specified throughout this paper. It is only a structure such as 10b which allows incompatible number marking to occur.



ukpabq



ukpabq

Regarding the representations for *étábq* and *étáwe* in 9a and 9b, it is only 9a that allows the +plural feature of *ábq* to percolate to the mother node and thus to be available for agreement. Another consequence of 9a is that we should expect the prefix *e-* to adjoin to verbal elements in other examples of word formation. Indeed, as Table VIII suggests, adjoining this prefix to a verbal element leads to a nominal form which refers to an entity resulting from the action identified by the verb. Such a resultative meaning is consistent with the representation in 9a where *etaan* would refer to something which results from a spreading action performed relative to the hand or foot, as is the case with 'palm of the hand' and 'sole of the foot.' Finally, we might speculate that forms such as *étábq* and *étáwe* were historically plural forms whose corresponding singulars have become lost.

Table VIII. Nouns derived from verbs by *e-* affix.

éfioo 'wind'	fioo 'to blow'
ékpa 'vomit'	kpa 'to vomit'
éta 'utterance, word'	ta 'to utter/speak'

Lastly, we look at the form *úgúóbq* [u 'nominalizing prefix'-guen 'to bend' - *óbq* 'hand'] and *úgúoq* [u 'nominalizing prefix'-guen 'to bend' - *oq* 'leg'] meaning 'elbow' and 'knee,' respectively. These forms appear to manifest structural configurations like 9b and 10b, since *guen* in intransitive syntactic structures of the type required by 9a and 10a demands the presence of the Goal particle *re*, e.g. *ólí óbq guen ré* 'the arm bent,' whereas in transitive structures it does not, e.g. *ó o guen óbq* 'he is bending the arm.' This fact, combined with *u*'s function as a nominalizing prefix, e.g. *udoo* 'play' from *doo* 'to play;' and *uroo* 'quarrel' from *roo* 'to quarrel,' suggests that a

transitive relation with *obo* functioning as Thematic direct object is most appropriate.

In the preceding we have attempted to outline principles of agreement which govern number marking in body-part compounds. Clearly, these principles operate within the lexicon at a presyntactic level. Although we have not in this study examined agreement principles in syntax, this paper sets the stage for a more thorough analysis of their operation. With such a study we may be able to determine the extent to which the properties of agreement principles are the same or different across morphological and syntactic modules. It thus remains to be seen how general principles of grammatical agreement might constrain the functioning of these different modules.

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